



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/550,015	09/23/2005	Yoshio Okamoto	1261-0158PUS1	8087

2292 7590 11/05/2007  
BIRCH STEWART KOLASCH & BIRCH  
PO BOX 747  
FALLS CHURCH, VA 22040-0747

EXAMINER
----------

THERKORN, ERNEST G

ART UNIT	PAPER NUMBER
----------	--------------

1797

NOTIFICATION DATE	DELIVERY MODE
-------------------	---------------

11/05/2007

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/550,015	<b>Applicant(s)</b> OKAMOTO ET AL.	
	<b>Examiner</b> Ernest G. Therkorn	<b>Art Unit</b> 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 22 October 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 3 and 9-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 1797

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, and 4-8 are rejected under 35 U.S.C. 102(A and/or E) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Andersson (WO 03/004534). The claims are considered to read on Andersson (WO 03/004534). However, if a difference exists between the claims and Andersson (WO 03/004534), it would reside in optimizing the elements of Andersson (WO 03/004534). It would have been obvious to optimize the elements of Andersson (WO 03/004534) to enhance separation.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Andersson (WO 03/004534) in view of Japan Patent No 8-59702 and its attendant Machine Language Translation. At best, the claim differs from Andersson (WO 03/004534) in reciting crosslinking through the 6-position. Japan Patent No 8-59702 and its attendant Machine Language Translation (paragraph 8) disclose that it is desirable to crosslink cellulose through the 6-position. It would have been obvious to

crosslink through the 6-position in Andersson (WO 03/004534) because Japan Patent No 8-59702 and its attendant Machine Language Translation (paragraph 8) disclose that it is desirable to crosslink cellulose through the 6-position.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Andersson (WO 03/004534) in view of either Okamoto (U.S. Patent No. 6,217,769) or Duval (U.S. Patent Publication No. 2001/0029282). At best, the claim differs from Andersson (WO 03/004534) in reciting the modifying molecule has an isocyanate group in it. Okamoto (U.S. Patent No. 6,217,769) (column 5, lines 40-49) discloses that isocyanate provides a carbamate linkage for the derivatizing molecule. Duval (U.S. Patent Publication No. 2001/0029282) (paragraphs 74-79) discloses isocyanate is used to derivatize a polysaccharide. It would have been obvious to use a modifying molecule with an isocyanate group in it either because Okamoto (U.S. Patent No. 6,217,769) (column 5, lines 40-49) discloses that isocyanate provides a carbamate linkage for the derivatizing molecule or because Duval (U.S. Patent Publication No. 2001/0029282) (paragraphs 74-79) discloses isocyanate is used to derivatize a polysaccharide.

Claims 1, 2, and 4-8 are rejected under 35 U.S.C. 102(B) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Duval (U.S. Patent Publication No. 2001/0029282). The claims are considered to read on Duval (U.S. Patent Publication No. 2001/0029282). However, if a difference exists between the claims and Duval (U.S. Patent Publication No. 2001/0029282), it would reside in optimizing the elements of Duval (U.S. Patent Publication No. 2001/0029282). It would have been

obvious to optimize the elements of Duval (U.S. Patent Publication No. 2001/0029282) to enhance separation.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Duval (U.S. Patent Publication No. 2001/0029282) in view of Japan Patent No 8-59702 and its attendant Machine Language Translation. At best, the claim differs from Duval (U.S. Patent Publication No. 2001/0029282) in reciting crosslinking through the 6-position. Japan Patent No 8-59702 and its attendant Machine Language Translation (paragraph 8) disclose that it is desirable to crosslink cellulose through the 6-position. It would have been obvious to crosslink through the 6-position in Duval (U.S. Patent Publication No. 2001/0029282) because Japan Patent No 8-59702 and its attendant Machine Language Translation (paragraph 8) disclose that it is desirable to crosslink cellulose through the 6-position.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Duval (U.S. Patent Publication No. 2001/0029282) in view of either Andersson (WO 03/004534) or Japan Patent No 8-59702 and its attendant Machine Language Translation. At best, the claim differs from Duval (U.S. Patent Publication No. 2001/0029282) in reciting the crosslinking molecule has plural isocyanate groups in it. Andersson (WO 03/004534) (page 8, lines 16-19) discloses that a polysaccharide crosslinking agent can be diisocyanate. Japan Patent No 8-59702 and its attendant Machine Language Translation (paragraph 8) disclose it is desirable to crosslink with a polyfunctional isocyanate. It would have been obvious to crosslink with a molecule having plural isocyanate groups in it either because Andersson (WO 03/004534) (page

Art Unit: 1797

8, lines 16-19) discloses that a polysaccharide crosslinking agent can be diisocyanate or because Japan Patent No 8-59702 and its attendant Machine Language Translation (paragraph 8) disclose it is desirable to crosslink with a polyfunctional isocyanate.

Claims 1, 2, and 4-8 are rejected under 35 U.S.C. 102(B) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Okamoto (E.P. 527,235). The claims are considered to read on Okamoto (E.P. 527,235). However, if a difference exists between the claims and Okamoto (E.P. 527,235), it would reside in optimizing the elements of Okamoto (E.P. 527,235). It would have been obvious to optimize the elements of Okamoto (E.P. 527,235) to enhance separation.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Okamoto (E.P. 527,235) in view of Japan Patent No 8-59702 and its attendant Machine Language Translation. At best, the claim differs from Okamoto (E.P. 527,235) in reciting crosslinking through the 6-position. Japan Patent No 8-59702 and its attendant Machine Language Translation (paragraph 8) disclose that it is desirable to crosslink cellulose through the 6-position. It would have been obvious to crosslink through the 6-position in Okamoto (E.P. 527,235) because Japan Patent No 8-59702 and its attendant Machine Language Translation (paragraph 8) disclose that it is desirable to crosslink cellulose through the 6-position.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Okamoto (E.P. 527,235) in view of either Andersson (WO 03/004534) or Japan Patent No 8-59702 and its attendant Machine Language Translation. At best, the claim differs from Okamoto (E.P. 527,235) in reciting the crosslinking molecule has plural isocyanate

Art Unit: 1797

groups in it. Andersson (WO 03/004534) (page 8, lines 16-19) discloses that a polysaccharide crosslinking agent can be diisocyanate. Japan Patent No 8-59702 and its attendant Machine Language Translation (paragraph 8) disclose it is desirable to crosslink with a polyfunctional isocyanate. It would have been obvious to crosslink with a molecule having plural isocyanate groups in it either because Andersson (WO 03/004534) (page 8, lines 16-19) discloses that a polysaccharide crosslinking agent can be diisocyanate or because Japan Patent No 8-59702 and its attendant Machine Language Translation (paragraph 8) disclose it is desirable to crosslink with a polyfunctional isocyanate.

The restriction and election of species requirements have been reconsidered, deemed proper, and made final for the reasons of record.

Any inquiry concerning this communication should be directed to E. Therkorn at telephone number (571) 272-1149. The official fax number is 571-273-8300.

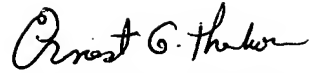
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic

Application/Control Number: 10/550,015

Page 7

Art Unit: 1797

Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Ernest G. Therkorn".

**Ernest G. Therkorn  
Primary Examiner  
Art Unit 1797**

EGT  
October 30, 2007